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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,818

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Kazuhiko Tsuda

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EXAMINER

ANDERSON, GUY G

ART UNIT

PAPER NUMBER

2883

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,818	Applicant(s) TSUDA ET AL.	
	Examiner Guy G. Anderson	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7, 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/18/2006 & 5/31/2006 & 7/10/2007 & 10/3/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

- 1.1 In response to the election/restriction requirement mailed 3/13/2008, applicant has elected without traverse Species B, an LCD Device embodiment two as shown in Figures 6-9 and described at pages 41-54 of the specification. Applicant asserts that claims 1-8 read on Species B. Examiner disagrees.

Claim 7 is drawn to Species C, an LCD device of embodiment three, with a polarization selective reflection means which reflects a second circularly polarized light.

Therefore, claims 7 and 9-10 are withdrawn from further consideration and claims 1-6 and 8 will be examined as being drawn to the elected Species B.

Claim Rejections - 35 USC § 102

- 2.1 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 2.2 Claims 1-3, 5-6 are rejected as being anticipated by US-6147937 to Arikawa.

Regarding claims 1-3 and 5-6, Arikawa specifically discloses a display device comprising/wherein:

1. A liquid crystal display device comprising: a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates, [Fig. 1-3, #8] and polarization selective reflection means [Fig. 1-3, #32, 16], provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status. [Fig. 1-3, #32, 16]

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2. A liquid crystal display device comprising: a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates [Fig. 1-3, #8]; polarization selective reflection means, [Fig. 1-3, #32, 16] provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status [Fig. 1-3, #32, 16]; and light irradiating means [Fig. 1-3, #10], provided between the polarization selective reflection means and the liquid crystal display medium, for irradiating the liquid crystal display medium with light from a light source.

3. A liquid crystal display device comprising: a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates [Fig. 1-3, #8]; polarization selective reflection means [Fig. 1-3, #32, 16], provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status [Fig. 1-3, #32, 16]; light irradiating means [Fig. 1-3, #10], provided between the polarization selective reflection means and the liquid crystal display medium, for irradiating the liquid crystal display medium with light from a light source; and polarization control means [Fig. 1-3, #35, 36] provided between the polarization selective reflection means and the liquid crystal display medium, for controlling a polarization status of light traveling from the polarization selective reflection means towards the liquid crystal display medium. [Fig. 1-3, #35, 36]

5) the polarization control means is a polarization controlling liquid crystal medium in which the polarization status of the light is controlled in accordance with an alignment status of liquid crystal molecules in the liquid crystal layer. [Fig. 1-3, #36]

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6) the polarization selective reflection means transmits first linearly polarized light of light incident on the first surface opposite to the second surface on the side of the liquid crystal display medium, and reflects second linearly polarized light which is perpendicular to the first linearly polarized light. [Fig. 1-3, # 32, 16]

Claim Rejections - 35 USC § 103

- 3.1 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 3.2 Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US-6147937 to Arikawa.

Regarding claim 4, Arikawa does not specifically disclose an enclosure with a light inlet window. However, the nature of transfective displays is that there is an enclosure to support the overall display with a window on a surface side that acts to 1) allow users to actually view the display which makes the devices usable and thus marketable and 2) allows light to enter the display so that ambient light can be used to augment the visual display and thus save on energy consumption by the LCD device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an enclosure with a display window and light inlet window.

Regarding claim 8, Arikawa does not specifically disclose using a TN LC layer for the polarization controlling means. Arikawa does disclose using a cholesteric LC layer for such polarization controlling means.

TN LC material is well known in the art and it would have been obvious to one of ordinary skill in the art at the time of the invention to use TN LC layers in order to provide more accurate polarization control.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy G. Anderson whose telephone number is 571.272.8045. The examiner can normally be reached on Tuesday-Saturday 0900-2200.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571.272.2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Guy G Anderson/
Examiner, Art Unit 2883
June 16, 2008

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883